

Title (en)

EPOXY RESIN COMPOSITION, PREPREG, AND CARBON FIBER-REINFORCED COMPOSITE MATERIAL

Title (de)

EPOXIDHARZZUSAMMENSETZUNG, PREPREG UND KOHLENSTOFFFASERVERSTÄRKTES VERBUNDSTOFFMATERIAL

Title (fr)

COMPOSITION DE RÉSINE ÉPOXY, PRÉIMPRÉGNÉ, ET COMPOSITE RENFORCÉ PAR FIBRES DE CARBONE

Publication

EP 3020763 A1 20160518 (EN)

Application

EP 14823216 A 20140710

Priority

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Abstract (en)

An epoxy resin composition including [A1] a hardener represented by Formula (1), and [B] an aromatic epoxy resin having tri- or higher functionality, wherein a carbon nuclear relaxation time T₁ C corresponding to a benzene ring carbon atom in the main backbone of Formula (1) assigned to 130 ppm in a solid-state ¹³C-NMR spectrum is 42 seconds or longer, and a prepreg and a carbon fiber-reinforced composite material obtained using the epoxy resin composition: wherein X represents any one selected from -CH₂-, -O-, -CO-, -C(=O)O-, -S-, -SO₂-, and -NHC(=O)-; n represents 1 to 5; and R₁ to R₆ each represent at least one selected from the group consisting of a hydrogen atom, an aliphatic hydrocarbon group having 1 to 4 carbon atoms, an alicyclic hydrocarbon group having 4 or less carbon atoms, and an a halogen atom, wherein when X is -C(=O)O- or -NHC(=O)-, X may be in either direction. Provided are an epoxy resin composition that provides a carbon fiber-reinforced composite material excellent in tensile strength and compression strength and suitable as a structural material, a prepreg, and a carbon fiber-reinforced composite material.

IPC 8 full level

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Cited by

EP3797991A4; EP3102621B1; WO2015118117A1

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